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COMPUTERNEWS

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Janet Campbell, Editor

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TO: UTCC STAFF AND USERS

In February, since UTCC had been in a fairly stable state for over a year, I took on the additional task of directing the newly formed Student Record Services (an amalgamation of parts of Statistics and Records and the Information Systems Department). Although we announced at that time that I would continue on as Director of UTCC while devoting most of my attention to SRS, it became clear that nothing was gained by this, and I have now formally resigned from UTCC.

Much has changed since I came to UTCC in 1970. We replaced one of our 360-65's with a 370-165, moved the other and installed APL on it and reorganized along 'product lines' to cope with the difficulties caused by having three machines in three different locations.

The responsibility for ASUT and EUT (the High Speed Job Stream terminals) was shifted to the Centre and very major changes were made to them: the most obvious changes were to tear down the walls with their 'teller windows' and go to an open shop, cafeteria style arrangement. The terminals now operate unattended - they once required a staff of 10! - and process several times as many jobs as they did previously.

The Computer Research Facility was amalgamated with UTCC and its 360-44 sold. CRF was encouraged to concentrate its efforts on minicomputers and the support of applications involving specialized hardware.

In 1974 the 370-155 supporting the administrative computing applications was transferred to UTCC although the machine was not physically moved.

Many of the more subtle changes have resulted from an attempt to decentralize access to the facilities and to make that access as much 'open shop' as possible. We had a slogan 'Help the User to help himself'; we talked about trying to make 'Big appear Small' - get the advantages of large scale computing without the disadvantages - and we introduced the 'Corner Store' concept for remote terminals - later called local terminals as we rearranged our viewpoint. These policies were seen to be a success and gradually most of the terminals were turned over to UTCC to operate. We tried very hard to achieve a symmetry in our view of the access to the machine - in fact we called the main I/O room Sandford Fleming Terminal! - and today I am fairly sure that the central processing equipment and its immediate staff could be moved somewhere else without disruption of service or any major reorganization.

I have tried to encourage within UTCC an attitude of openness and a willingness to discuss issues frankly with anyone and I think this has paid off in a remarkably peaceful six years in spite of the changes we have gone through.

I have been a computing centre director longer than I intended to but it has been rewarding and fun. My thanks go to the appreciative users who have made it worthwhile and to the UTCC staff who have made it happen.

June 25, 1976 J. C. Wilson

UTCC RATE INCREASE

The Advisory Committee on Computing Facilities and Services has recommended an overall rate increase of 7% for UTCC services. However, we have decided to restrict price increases to three basic areas: Unit Record, Tape/Disk Storage and GOULD/Calcomp Services to create an overall increase of 4.5% in UTCC revenue.

Effective August 1, 1976 the basic rates for the following services will be increased:

a. Unit Record

cards read	from $1.00/1000 cards to $1.30/1000 cards
lines printed	from $1.00/1000 lines to $1.30/1000 lines
cards punched	from $2.50/1000 cards to $3.50/1000 cards
printer mounts	from $2.00/mount to $3.00/mount

b. Tape/Disk Storage

tape storage	from $1.00/month to $1.50/month
tape rental	from $1.00/month to $1.50/month
disk storage	from $1.00/month to $1.50/month

c. GOULD/Calcomp

GOULD	from $0.25/ft to $0.35/ft
Calcomp	from $20.00/hr to $30.00/hr

Price increases are required in these areas to offset increased cost of resources and salaries at UTCC.

The updated Rate Schedule will be distributed to USERBOOK subscribers in the near future. Any inquiries should be directed to Stan Yagi at 978-7331.

Stan Yagi

UTCC PUBLICATIONS GRAFFITI BOARD

As part of our attempt to evaluate and improve our publications, a graffiti sheet has been posted outside the Publications Office, Sandford Fleming Building, Room 137.

To serve as a means of user feedback, this sheet is reserved exclusively for user comments and suggestions re UTCC publications. General comments re UTCC policies and facilities should be placed on graffiti sheets located at the various terminal sites.

All comments are welcome!

Ruth Borenstein

NEW COMPUTING CO-ORDINATOR AT SCARBOROUGH

I am pleased to announce the appointment of Martin Hubel as the new Computing Co-ordinator at Scarborough College. Although just graduating from the University of Toronto in Computer Science, Martin is a familiar face around the Centre, having worked in the downtown Advising Office for the past 14 months.

Martin can be reached at 284-3173, Scarborough College, Room S630.

Welcome aboard...

Stan Yagi

THE 7TH ONTARIO UNIVERSITIES COMPUTING CONFERENCE

On June 1-4, the 7th Ontario Universities Computing Conference was held at the University of Waterloo. The theme of the Conference was 'Applications and Objectives'. Stan Yagi, Rein Mikkor and Don Gibson represented UTCC.

The sessions placed great emphasis on the subject of mini computers -- minis versus maxis, applications and minis, and the care and feeding of minis.

The high point of the presentations was the session given on computer-aided instruction. W.P. Olivier of the Ontario Institute for Studies in Education discussed the 'CAN' system currently being used and soon-to-be accessible through seven data communication systems thoughout Ontario.

J.B. Moore of the University of Waterloo spoke of the research being carried out, linking CAI and instructional television.

A most interesting presentation was given by E.O.G. Davies of Algonquin College who discussed the possibilities of the use of CAI in courses offering first-language training in English.

Next year's conference will be held at York University, Toronto.

Don Gibson

HOURS OF SERVICE -- CIVIC HOLIDAY

The following hours of service will be in effect for S/370-165-II users during the Civic Holiday:

July 31 (Saturday)	August 1 (Sunday)	August 2 (Monday)
10:00-18:00	10:00-18:00	closed

Hours of service for S/360-65 users will be:

July 31 (Saturday)	August 1 (Sunday)	August 2 (Monday)
9:00-18:00	9:00-18:00	unatt'd

Normal hours of service for both systems will resume Tuesday, August 3, 1976.

All users are reminded that summer hours for all eligible University of Toronto staff members will commence on Monday, July 5 and regular hours will resume on Tuesday, September 7. Due to summer hours, UTCC offices will be closed at 4:30 p.m. Monday to Friday.

PERSONNEL CHANGES

The Computer Centre welcomes Martin Hubel to it's full-time staff. Martin is the new Computing Co-ordinator at Scarborough College. Adam Love has returned to work in I/O. Welcome back Adam.

Leaving this month are Lynne Jenkins, Vikki Coulson, Bill Beesley, Robin Jung and Gordon Brown. We understand that Lynne and Vikki plan to travel and Bill, Robin and Gordon will be going on to other positions. Best wishes to you all.

June Bridges

RECENT ACQUISITIONS IN THE DEPARTMENT OF COMPUTER SCIENCE LIBRARY

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New York, Academic Press, 1975.

CLASS C SERVICE CHANGES

Several changes have been made to CLASS=C service for the summer period. The rate at which memory is charged has been reduced from the former service factor of .75 times the standard memory charge to a new effective service factor of .375 or one half of the former rate. This rate is effective from June 1, 1976 until August 31, 1976.

Several users may have noticed that the announcement of the price reduction in HOTNEWS was made about June 17. This resulted from a request that UTCC make this allowance retroactive to June 1. Users who ran CLASS C jobs during the period June 1 to June 17 will have the charges reduced on their monthly invoice to the correct amount.

Three other service expansions were put into effect as of June 17.

1. The maximum memory allocation allowed in CLASS C was increased from the former limit of 250K to a new limit of 350K.

2. CLASS C service on weekdays may now begin prior to midnight at UTCC's discretion if the normal class loads have effectively dried up by that time. Should new CLASS A/B loads develop, of course, CLASS C service will be suspended until these loads disappear again. On weekends, again at UTCC's discretion, CLASS C jobs that were in the CLASS C queue prior to the weekend will be run during periods of idle time.

3. The operators have been allowed, under certain precisely defined circumstances, limited authority to 'break the FIFO rule' or allow queue-jumping. (Recall that previously, the queue was rigidly FIFO and no queue jumping was allowed at all). The circumstances are typically as follows:

   a. The time window remaining for CLASS C service on weekday shifts is too small to run the top job on the queue. The operator may scan down the queue until he finds the first job that will 'fit the window' in order to allow optimal usage of service availability.

   b. The job at the top of the queue cannot run because of non-availability of one or more peripheral devices. There are two cases here. The first case concerns a device which is down and awaiting maintenance. In this case the operator will select the next job and proceed with the queue, returning to the original top job when the device is repaired. The second case concerns non-availability of devices because they are already allocated to a CLASS B job(s). In this case the operator will determine whether the devices will be available shortly. If so, he will wait so the top job may run. If not, he will scan down the queue looking for the first job that can run without the device(s) and release it, provided that the time estimation of this job is of the same order of magnitude of the job(s) that is being held because of device non-availability. Again, he will return to the top of the queue as soon as the devices become available and will proceed under FIFO rules as normal.

All these rule modifications have been made to allow maximum usage of the CLASS C service time available. Except for the changes listed in this article, existing CLASS C rules and unique CLASS C credit request restrictions still apply. Users are referred to USERBOOK Sections 3.2 and 3.3 for further information on CLASS C.

Derry Cox

4TH MEGABYTE INSTALLED

On alternate weekends since early April, Advanced Memory Systems has been using nonproduction time on UTCC's S/370-165-II to develop an interface to allow the attachment of more than the maximum three megabtyes of memory supported by IBM for S/370-165 machines. In fact, our S/370-165-II already had an AMS-supplied interface for our third megabyte, since it originally came from IBM with only two megabytes of memory.

In late May, AMS made use of the experience obtained at UTCC to install a fourth megabyte of memory on a S/370-165-II in Houston, where a large block of machine time was available for debugging. The installation was the first of its kind on a S/370-165-II and was an unqualified success. Encouraged, AMS returned to UTCC and installed the fourth megabyte interface and memory on our machine on the weekend of June 12. Except for a few problems, which were traced to a faulty power connection, the fourth megabyte has been running reliably.

Eugene Siciunas

'SPENDING' THE FOURTH MEGABYTE

The newsletter article above discussed the installation of the fourth megabyte on the S/370-165-II. In response to questions UTCC has received from users along the lines of 'what are we going to do with your new megbyte, etc...', the planned method of allocation of the megabyte is as follows:

-- 600K will go to the dynamic memory pool for batch use. This will bring the pool available to the batch user to slightly under 1400K total. No shift in the 250K boundary between CLASS A and CLASS B is contemplated. The increased memory will ease some of the allocation problems which arise during busy periods. The only change in batch memory rules occurs in CLASS C and involves an increase from the old limit of 250K to a new limit of 350K. Users are referred to another article in this newsletter concerning CLASS C service changes.

-- 250K is destined for use in supporting WYLBUR, a high performance terminal-driven text editing and remote job entry system which originated at Stanford and is actively used at many North American universities. WYLBUR is presently scheduled to be brought into service in the fall for public use so the 250K will intermittently be in the batch pool or in use for WYLBUR installation work during the summer.

-- The remaining 150K will be used for some system tuning and enhancements to the high-speed job stream monitor in the fall. Of this 150K, about 30K will go to the monitor; the rest will go to increasing some buffers and making certain modules in the link-pack area resident. These 'tuning' efforts should be reflected in better batch service and TSO response.

The numbers quoted above are accurate to about 20K each at this point in time. While they may change marginally when the actual work to invoke some of these items is done, batch users may be assured that the 600K is fairly sacred and the batch increase will be within a few kilobytes of this one way or another.

Derry Cox

3330 DISK ADDED

UTCC has added another 3330 disk of space to the USER online-space pool. This represents a 17% increase in available space for S/370-165-II users. There are now seven single-density 3330 disks dedicated to this purpose, representing an availability of approximately 700 million bytes plus another 145 million bytes on 2314-model disks. The previous disk drive which was added during the latter part of February was in operation barely 3 months before becoming essentially full. UTCC will closely monitor the consumption rate on this new pack and increase the pool again when necessary.

To get to the 3330 online-space pool use the generics USER or USER3330. Users who wish to access 2314 online storage must use USER2314. Do not use UNIT=3330 on DD statements as UTCC is unable to insure that the user´s dataset will be properly placed in available user storage if he does so.

Derry Cox

ARGONNE RELEASES FUNPACK EDITION II

Argonne National Laboratories, well known for their release of EISPACK, the eigensystem package, have now released FUNPACK Edition II, the special function package. (UTCC´s system contains Edition I of FUNPACK).

Edition II contains the following special functions: J0(X) and J1(X), Bessel functions of the first kind of orders 0 and 1; Y_ν (X), Bessel functions of the second kind of real order; I0(X) and I1(X), modified Bessel functions of the first kind of orders 0 and 1 and EXP(-|X|)*I0(X) and EXP(-|X|)*I1(X); K0(X) and K1(X), modified Bessel functions of the second kind of orders 0 and 1, and also EXP(X)*K0(X) and EXP(X)*K1(X); and PSI(X), the logorithmic derivative of the Gamma function.

These functions represent the state of the art in the field. Some of them are designed after algorithms published in the last few years.

The University of Toronto is a testsite for the Argonne effort and has independently tested the above special functions. Those users who would like to use any of the above routines are invited to contact Imre Farkas, Argonne Testsite Representative at the University of Toronto. He may be reached at the Department of Computer Science, McLennan Physical Laboratories, Room 1208, telephone 978-8747.

Imre Farkas

SPEAKEASY SESSIONS -- ANOTHER LAMBDA

UTCC has just received a new version of LAMBDA SPEAKEASY. This version, called LAMBDA+ (´Lambda-plus´), will replace LAMBDA. LAMBDA+ includes corrections to errors discovered since the release of LAMBDA. The following changes are included:

Editor

1. The Attention key can now be used while Editing
2. Several bugs in the Editor have been repaired
3. The Edit command APPEND has been added
4. The first line of a newly created SPEAKEASY program or data file no longer contains its reference name. That name will be indicated when the object is listed.

cont´d...

SPEAKEASY SESSIONS Cont'd

Other

1. BUG, PRAISE, COMPLAIN and SUGGESTION are new words to allow users to send notes to UTCC SPEAKEASY staff
2. STEP has been repaired so that it can be modified while in the Holding Mode
3. INTRPFRAC and INTRPCUBIC have been fixed
4. LIBINDEX has been replaced and is much more powerful
5. WHATISIN is an alternative to LIBINDEX that provides information about members
6. MODDIREC is now available as a linkule
7. GETSPSS linkule is available for reading SPSS files.

Users may be interested to note that items 5 through 7 of 'Other' originated at UTCC and have been available to users for some time (see COMPUTERNEWS #132, January 1976); these are now being distributed with some revisions to all installations.

The LAMBDA+ version should be installed by July 1, 1976. A message regarding installation will be printed at the start of each run or session. Any problems that are encountered with the new release should be brought to the attention of Ian Darwin, 978-7318, as soon as possible.

In conjunction with this change, all KAPPA libraries will have been deleted (KAPPA has not been operational since May 1st). Also, the TUTORIAL library will no longer have the LEVEL parameter associated with it; only HELP, LINKULES and STEPLIB will use LEVEL, if it is specified (there is currently no reason to specify LEVEL). All suggestions, problems, etc. should be directed to Ian Darwin, 978-7318, or via the new SUGGEST function.

Ian Darwin

BMDP UPDATE

Recently, the existing library of BMDP programs was updated to correspond to the latest revision of BMDP dated February/76. This update should correct several outstanding bugs in individual programs and in the parameter language itself. As before, the new modules are automatically accessed through the use of the JCL procedures STATP and STATPOPN.

Len Prepas

ATTENTION USERBOOK HOLDERS

Routine AIDIII/MCA is no longer supported by UTCC. Therefore, all holders of module 3.7AID3MCA are asked to remove the module from their copy of USERBOOK. Users who are adversely impacted by the withdrawal of this documentation should contact Len Prepas at 978-6878.

Len Prepas

GPJS - SOFTWARE USAGE STATISTICS

The following chart summarizes the software usage per classified procedure and program names for the General Purpose Job Stream from May 1, 1976 to June 4, 1976.

cont'd...

GPJS - STATISTICS Cont'd

SOFTWARE	USES (#JOBSTEPS)	(%)
ALGOL	110	0
APLSV	27	0
ASM	841	2
ATSUTIL	4	0
COBOL	265	0
CSMP	88	0
DATATEXT	209	0
DBUGUTIL	38	0
DISKUTIL	2,054	6
DSUTIL	6,354	19
DYNAMO	8	0
FORTRAN	9,217	28
GPSS	11	0
GRAPHICS	1,759	5
JCLUTIL	361	1
MARKEXAM	36	0
MARKIV	1,489	4
MPS/MPSX	78	0
OSUTIL	337	1
PAPERTAP	234	0
PL/I	2,171	6
RPG	61	0
SAS	49	0
SERVAID	299	0
SNOBOL	732	2
SORTMERG	1,732	5
SPEAKEZ	39	0
SPSS	2,380	7
SSP/BMDD	323	0
TAPEUTIL	525	1
TIPRS	53	0
TSO	77	0
XFR	391	1
TOTAL	32,352	

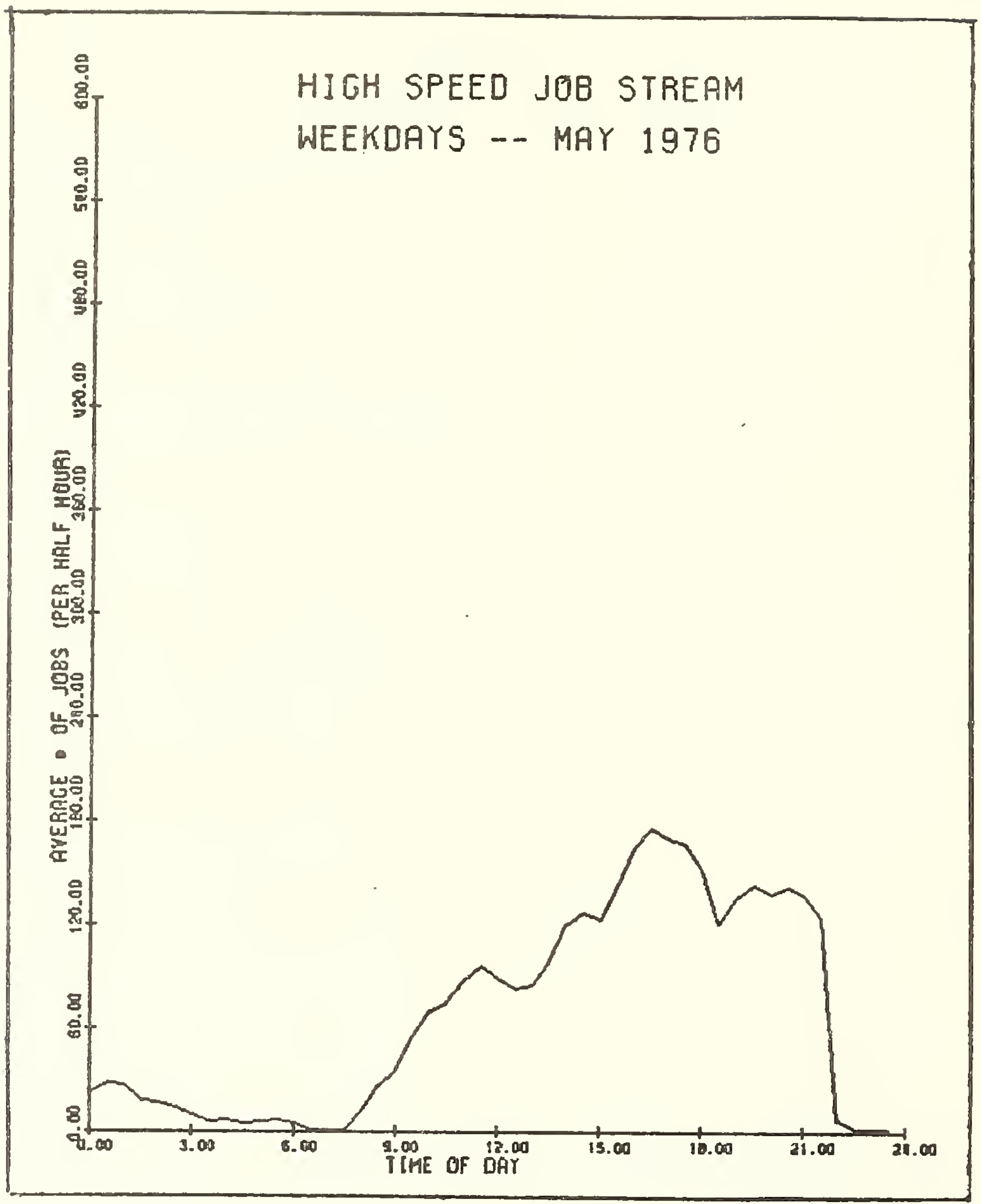
Kin Fong

HSJS MONTHLY STATISTICS

During the month of May 1976, 87,524 jobs were processed compared with 171,028 jobs for the previous year, a decrease of 48.8%.

The following charts summarize the HSJS activity for the month of May. The graph represents the average number of jobs processed during each half hour period of the day.

Mark Tapia



RESOURCE USAGE BY PROCESSOR

PROCESSOR	#USES	%TOTAL	TOTAL PER PROCESSOR CPU (MIN)	#CARDS READ	#LINES PRINTED	AVERAGE PER USE CPU (MIN)	#CARDS READ	#LINES PRINTED
WATFIV	54299	(62)	761.33	9470797	10125154	0.012	172	184
OTHER*	13043	(15)	159.80	899784	1884005	0.012	68	144
PL/C	11913	(14)	185.41	1731473	3080365	0.012	144	256
UTILITY	4903	(6)	15.11	714952	929297	0.000	144	188
ASMG	1306	(1)	22.50	236432	395368	0.016	180	300
WATBOL	789	(1)	9.60	183215	214558	0.012	232	268
SPITBOL	621	(1)	6.44	82175	120054	0.008	132	192
ALGOLW	400	(0)	4.59	75028	92577	0.008	184	228
LISP	180	(0)	1.39	15222	29116	0.004	84	160
PLUTO	58	(0)	0.22	2794	5709	0.000	48	96
SIMON	7	(0)	0.05	777	862	0.004	108	120
ASSIST	5	(0)	0.10	751	1007	0.016	148	200
	0	(0)	0.00	0	0	0.000	0	0
	0	(0)	0.00	0	0	0.000	0	0
	0	(0)	0.00	0	0	0.000	0	0
	0	(0)	0.00	0	0	0.000	0	0
TOTAL	87524		1167.04	13413400	16878072	0.013	153	192

* SP/K, SPSSQ and SNAP

S/370-165-II RELIABILITY

The reliability statistics for May indicate an uptime percentage of 98.8 while the average number of unscheduled IPL's per day reached 0.67. The number of scheduled hours of production for May totalled 480.

MONTHLY COMPARATIVE FIGURES

MONTH	% UPTIME	UNSCHED. IPLs/DAY
Jan/75	95.7	2.77
Feb/75	96.0	1.14
Mar/75	96.7	1.10
Apr/75	98.6	0.70
May/75	99.4	0.60
Jun/75	97.4	0.79
Jul/75	95.2	1.23
Aug/75	97.6	0.83
Sep/75	99.1	0.87
Oct/75	97.2	1.13
Nov/75	95.8	1.63
Dec/75	99.4	0.48
Jan/76	99.1	0.43
Feb/76	98.9	0.97
Mar/76	96.8	1.03
Apr/76	99.3	0.52
May/76	98.8	0.67

The percentage breakdown for total system downtime for May was:

HARDWARE: 95 minutes (28.0%)
SOFTWARE: 159 minutes (46.9%)
OTHER : 85 minutes (25.1%)

The major events contributing to these downtime totals were as follows:

May 8 - 45 minutes down - 1 IPL

(a) 5 minutes charged to channel errors on the GOULD plotter which resulted in a system wait.

(b) 40 minutes due to high machine room temperature (78 degrees) causing a thermal check on the S/165 CPU. It was necessary to wait for the temperature to drop before re-initializing the system.

May 11 - 59 minutes down - 3 IPL's

(a) 5 minutes attributed to HASP catastrophic error.

(b) 54 minutes caused by bad SYSOUT in the OS jobque. The TSOWTR was abending repeatedly on S002. The output was deleted to solve the problem.

May 16 - 75 minutes down - 2 IPL's

(a) 5 minutes due to loss of OS/HASP response. IPL cleared problem.

(b) 70 minutes attributed to IGF015W machine errors caused by running on the fourth megabyte of memory which was wired in parallel to the third. The hardware supervisor rewired the megabyte to normal configuration to rectify the problem.

May 17 - 35 minutes down - 1 IPL

(a) All time charged to software problems encountered when a new version of HASP (GFLP) was installed. Assurance executed a fallback to the old HASP.

May 18 - 30 minutes down - 0 IPL's

(a) 15 minutes due to extended maintenance on ITEL memory.

(b) 15 minutes attributed to an operational problem while attempting to install production scratch volume. (SYSDA)

Paul Scarborough

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                   DOWNTIME REPORT ON   S/370  FOR MAY 76

-------------------------------------------------------------------------------------------------------------------------------
|                                                       REIPLS(FREQ) // DOWNTIME (MN)                                          |
|  DAY  REIPL   DNTIME 0    5    10   15   20   25   30   35   40   45   50   55   60   65   70   75   80   85   90   95   100|
======================+----+----+----+----+----+----+----+----+----+----+----+----+----+----+----+----+----+----+----+----+|
| S  1     0       0   |
| S  2     0       0   |
| M  3     0       0   |
| T  4     0       0   |
| W  5     0       0   |
| T  6     0       0   |
| F  7     0       0   |
| S  8     1      45   |□********************************************
| S  9     0       0   |
| M 10     1      10   |□*********
| T 11     3      59   |□□□********************************************************
| W 12     2      13   |□□***********
| T 13     2      12   |□□**********
| F 14     2      10   |□□********
| S 15     0       0   |
| S 16     2      75   |□□*************************************************************************
| M 17     1      35   |□**********************************
| T 18     0      30   |******************************
| W 19     2      10   |□□********
| T 20     1      10   |□*********
| F 21     0       0   |
| S 22     0       0   |
| S 23     0       0   |
| M 24 (CENTER CLOSED) |
| T 25     0       0   |
| W 26     1       9   |□********
| T 27     1       7   |□******
| F 28     0      10   |**********
| S 29     0       0   |
| S 30     0       0   |
| M 31     1       5   |□****
-------------------------------------------------------------------------------------------------------------------------------


LEGEND        : ONE □   =ONE UNSCHED. IPL
                ONE *   =ONE MINUTE OF DOWNTIME


                TOTAL SCHEDULED HOURS OF PRODUCTION :  490
                TOTAL DOWNTIME (MN)   :   339 , AVG/DAY :  11.30 , AVG/PROD HOUR :    0.35
                TOTAL UNSCHED. IPL'S :    20 , AVG/DAY  :    0.67
                DOWNTIME RATE IS      :  1.19 PERCENT OF SCHEDULED PRODUCTION HOURS
```

INTERACTIVE SYSTEMS RELIABILITY

The reliability statistics for the month of May indicated substantial improvement over the previous months.

The uptimes achieved for the month of May for each of APL and ATS were 99.49% and 99.5% of scheduled operation, respectively. The number of scheduled hours of operation during the month of May totalled 470, while the number of unscheduled IPL´s per day was 0.20. In addition to the scheduled time, Interactive Services were also available for appproximately 125 hours of unattended weekend operation.

The percentage breakdown of total system downtime for May was: HARDWARE - 89 minutes (66.45%); SOFTWARE - 23 minutes (17.12%); OTHER - 22 minutes (16.43%). Six unscheduled IPL´s were required as a result of the failures. The major events contributing to downtime were as follows:

May 6: CPU entered solid system state indicating test I/O loop on spool. A forced interrupt on the disc address resulted in continuation of normal processing but lost all communication devices, thus necessitating a Re-IPL.

May 11: A software error in the SQA caused system response to degrade and HOSINITB to abend on S06C. Re-configuration of SQA appears to have solved this particular problem.

May 26: 2 IPL´s and 49 minutes of downtime was attributed to test I/O loops. Assurance will be applying numerous PTF´s that should correct this missing interrupt problem on 2314 disc drives.

The following table summarizes the time lost out of scheduled hours of production due to system failures for each of the systems.

Kam Jain

	DOWNTIME (MIN)		
DATE	APL	ATS	REASON
Mon. May 3	23	13	*Machine check (HARDWARE)
Thu. May 6	28	28	*Test I/O on Spool 1 (HARDWARE)
Tue. May 11	23	30	*HOSINITB abended S06C (SOFTWARE)
Tue. May 18	7	7	Equipment checks on 1052 (HARDWARE)
Wed. May 26	48	48	**Solid system on test I/O - SYSDA (HARDWARE)
Thu. May 27	15	15	*Power fluctuation (OTHER)
Total	144	141	*IPL Required

System Failures May 1 - May 31, 1976

HASP LINKAGE -- 360/370

APL and ATS users are still somewhat confused regarding the linkage between the two CPU´s and other remote stations. A detailed description is available in USERBOOK Section 4. This article will attempt to simplify some of the terminology and basic concepts.

ATS/RJE

The ATS/RJE facility was written in support of the Triangle University Computer Centre HASP/ HASP System which UTCC uses to provide communication between the S/370-165-II and S/360-65. The UTCC modification provided the mechanism for transmitting jobs between two CPU´s over a high speed communication link. HASP internal devices were expanded to provide linkage between ATS and HASP. An internal reader is used for submitting jobs to HASP and an internal retriever is used for placing output directly into the HASP output queue.

The routing concepts were also expanded in order to allow routing not only between two CPU´s but also to S/370 local and remote printers. Jobs can be submitted through ATS/RJE to be scheduled for execution as Batch O/S jobs on the S/370.

Printed and punched output from ATS/RJE will be returned to ATS unless otherwise specified by the /*ROUTE card which is placed after the user supplied Job Statement. For example, a user who wishes the printed output to be directed to the S/370 Batch Terminal at New Physics and punched output directed to the S/370 local punch would use /*ROUTE cards:

```
Col. 1          10          16

    /*ROUTE     PRINT       PHYST
    /*ROUTE     PUNCH       UTCC
```

Users submitting jobs from any card reader may still get their output routed to their ATS account by including the /*ROUTE cards (PRINT-PUNCH) in their card deck. The /*ROUTE cards for routing output back to ATS are:

```
Col. 1          10          16

    /*ROUTE     PRINT       ATS
    /*ROUTE     PUNCH       ATS
```

Users who wish to take advantage of this facility must also include a special /*ID card identifying the user´s ATS account number. The format for the /*ID card is:

```
Col. 1                      16

    /*ID                    nnnn
```

where nnnn is a four digit ATS account number (leading zeros must be included).

/*ROUTE PRINT LOCAL should be avoided as all output for jobs entering local devices will be automatically routed to the local device pool and all output for jobs entering a remote reader will be routed to the corresponding remote output devices. This may be altered so that, for example, remotes without punch devices will have punched output routed to the local punch or to a remote terminal convenient to the submitting work station. A list of remote terminals is found in Section 4. For a detailed description of the /*ROUTE card see USERBOOK module 3.3BATCH.

Kam Jain

UTCC COMPUTER EQUIPMENT

SYSTEM/370 MODEL 165-II

- located in SF103/105/112
- provides General Purpose Job Stream, High Speed Job Stream, APL SV and TSO services
- 4 megabytes of memory
- 1 drum (2301)
- 16 disk drives (3330)
- 8 disk drives (2314)
- 7 magnetic tape drives (5 9-track and 2 7-track)
- 6 display consoles
- 6 printers
- 5 card readers
- 1 card punch
- 8 remote batch terminals
- 1 paper tape reader
- Calcomp plotters (11" and 30")
- Gould plotter (11")
- OS/MVT with HASP

SYSTEM/360 MODEL 65

- located in McLennan Physical Laboratories
- provides APL and ATS services
- 1536K bytes of core
- 26 disk drives (2314)
- 3 9-track magnetic tape drives
- 1 printer
- 1 card reader
- 1 card punch
- 140 typewriter terminals
- OS/MVT with APL and ATS

COMPUTER RESEARCH FACILITY

- located in SF207
- DEC GT44 Systems with
  - 1 PDP-11/40 CPU
  - 2 9-track dual density tape drives
  - 1 1000 cpm card reader
  - VT17 graphics display unit
  - 1 lab. peripheral system with A/D & D/A
  - 1 CVI 260 Video Bandwidth Compressor
- DEC GT40 System with
  - 1 PDP-11/10 CPU
  - 1 2314 tape disk drive
  - 1 VT12 graphic display unit
  - 9-track/800 BPI tape drive
  - 1 Calcomp microfilm plotter

UTCC DIRECTORY

	ROOM	PHONE 978-
ASSOCIATE DIRECTOR		
Al Heyworth	SF214C	4936
ADMINISTRATION MANAGER		
Dave Scobie	SF143	8948
INFORMATION OFFICE		
General Inquiries	SF128	4990 or 4991
Don Gibson	SF128A	
MANAGER, SERVICES		
Stan Yagi	SG200	7331
MANAGER, MARKETING AND PROGRAMMING SERVICES		
Dave Scobie	SF143	8948
COMPUTING CO-ORDINATORS		
Sandford Fleming Terminal		
Mark Tapia	SF125	7109
Program Advisors	SF117	8599
Erindale		
Clem DiPlacido		828-5311
Scarborough		
Martin Hubel		284-3173
Arts and Science		
Dave Tritchler	SS2104	6509
New Physics		
John Roth	NP1202	8823
SUPERVISOR, APPLICATIONS SUPPORT		
Herb Kugel	SG304	7286
MANAGER, OPERATIONS		
Derry Cox	SF113	7092
SUPERVISORS, OPERATIONS		
Paul Scarborough (S/370-165-II)	SF114	6220
Kam Jain (S/360-65)	NP333	7374
Dave Wong (S/370-155)		6864
MANAGER, SYSTEMS		
Rein Mikkor	SF116	5058
SYSTEM HARDWARE SUPERVISOR		
Eugene Siciunas	SF113	4967
MANAGER, COMPUTER RESEARCH FACILITY		
Dennis Smith	SF214B	4800
LAB CO-ORDINATOR (CRF)		
Krishna Patnaik	SF207	4086
ACCOUNTS		
Ann DeFazio	SF139	7148
Wynona Bardgett	SF139	8702
ACCESS CODES		
Yvonne Bowen	SF139	8703
ASSISTANT MANAGER, INFORMATION SYSTEMS TERMINAL		
George Milo		5040

NOTE:

SF = Sandford Fleming
SG = 49 St. George
NP = McLennan Physical (New Physics)
SS = Sydney Smith

JOB AND SYSTEM STATUS QUERIES

SYSTEM/370, TSO	7373
ATS/APL	6234
2741 TERMINAL MALFUNCTIONS	7107
029 KEYPUNCH MALFUNCTIONS	6465

SERVICES

	DIAL-UP	ADVICE
APL - 2741	7200	6710
APL(ASCII)	7200	6710
APL SV - 2741	7239	6710
APL SV - TTY	7447	6710
ATS	7100	7107
TSO - 2741	7303	8599
TSO - TTY (10 cps)	7390	8599
TSO - TTY (30 cps)	7386	8599
DATATALK	6710	6710

UNIVERSITY OF TORONTO
COMPUTER CENTRE,
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